

Remarks

A cross-reference to the parent application has been added to the specification. Claims 22 and 23 have been amended to avoid the Examiner's objections, and claim 21 has been amended to clarify the concept claimed, and apparatus and program product claims have been added directed to the subject matter of claims 21-30.

The Examiner's rejection over prior art is based upon McNutt et al. Independent claims 21, 45 and 55, and thus all claims, are directed to responding to changes in "total available [cache] memory capacity", e.g., the physical removal or deallocation of memory available for use by the cache. Applicant submits that there is nothing in McNutt et al. that deals with responding to changes in total available cache memory capacity, as is the subject of these claims. McNutt deals with management of a cache, but nowhere mentions the possibility of a change in its capacity. The Examiner's rejection appears to be based only upon the fact that removal or addition of data to the McNutt cache will change available space in the cache. Applicant submits that this is not the same as a change in "*total* available [cache] memory capacity", as claimed herein, and that all claims therefore allowable over McNutt et al.

If any petition for extension of time is necessary to accompany this communication, please consider this paper a petition for such an extension of time, and apply the appropriate extension of time fee to Deposit Account 23-3000. If any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,



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Version With Markings to Show Changes Made

21. (Amended) A method of caching data for a direct access storage device having a plurality of addressable locations, comprising the steps of:

storing, in a cache memory having a total available memory capacity, copies of data retrieved from said direct access storage device, and a cache directory identifying data in said direct access storage device for which copies are stored in said cache memory, and identifying memory locations in said cache memory where each said copy is stored,

responding to a request for access to a storage device location for which a copy is stored in the cache memory, by accessing the copy stored in the cache memory,

responding to a request for access to a desired storage device location for which a copy is not stored in the cache memory, by accessing said desired storage device location from said storage device, and

responding to a change in [an amount of] said total available cache memory capacity [available] by altering said cache directory.

22. (Amended) The method of claim 21 wherein in response to an increase in the total [addition of new] cache memory capacity, the method further comprises modifying said cache directory to identify memory locations in said [new] cache memory where copies of data from said direct access storage device may be stored, and then storing, in said [new] cache memory, copies of data retrieved from said direct access storage device.

23. (Amended) The method of claim 21 wherein in response to a reduction in the total [the removal of removed] cache memory capacity, the method further comprises modifying said cache directory to no longer identify memory locations that are not available in said [removed] cache memory.